

**CLAIMS:** I claim:

1. An arrowhead comprising:
  - (a) a forward leading end;
  - (b) an arrowhead body having a central longitudinal axis;
  - (c) a cutting blade having a first cutting edge; and
  - (d) a second cutting edge configured upon said arrowhead such that at least a section thereof extends forward of said first cutting edge when said arrowhead is in a penetrating configuration, wherein when said arrowhead is in an in-flight configuration the perpendicular distance from said longitudinal axis to the furthest section of said cutting blade from said longitudinal axis is longer than the perpendicular distance the furthest section of said second cutting edge is displaced from said longitudinal axis.
2. An arrowhead as recited in claim 1 wherein when said arrowhead is in said penetrating configuration the forward terminus of said second cutting edge is located rearward of said forward leading end of said arrowhead.
3. An arrowhead as recited in claim 2 wherein the rearward terminus of said second cutting edge is located forward of a forward terminus of said first cutting edge.
4. An arrowhead as recited in claim 2 wherein the rearward terminus of said second cutting edge is located closer to said forward leading end of said arrowhead than to a forward end of an arrowshaft when said arrowhead is attached to said arrowshaft.
5. An arrowhead as recited in claim 2 wherein said second cutting edge has a linear length that is less than the linear length of said first cutting edge.
6. An arrowhead as recited in claim 2 wherein at least a section of said cutting blade projects outward from said arrowhead body when said arrowhead is in said in-flight configuration.

7. An arrowhead as recited in claim 2 further comprising an arrowhead tip located at said forward leading end of said arrowhead, said arrowhead tip comprising a facet and a facet boundary such that said second cutting edge is located rearward of said facet boundary when said arrowhead is in said penetrating configuration.

8. An arrowhead as recited in claim 7 wherein said facet boundary is substantially in coplanar alignment with at least a linear section of said second cutting edge.

9. An arrowhead as recited in claim 2 wherein when said arrowhead is in said penetrating configuration a line parallel to said central longitudinal axis that is displaced a distance outward from an exterior surface of said arrowhead body intersects said second cutting edge while intersecting at least a section of said cutting blade.

10. An arrowhead as recited in claim 9 wherein said parallel line intersects said first cutting edge when intersecting said second cutting edge.

11. An arrowhead as recited in claim 9 wherein said cutting blade is pivotally hinged to said arrowhead body.

12. An arrowhead as recited in claim 11 wherein said arrowhead is a blade-opening arrowhead and said cutting blade rotates in a rearward direction when rotating from said in-flight configuration to said penetrating configuration.

13. An arrowhead as recited in claim 12 wherein when said arrowhead is in said penetrating configuration a first plane parallel to a side face of said cutting blade that intersects at least a linear section of said first cutting edge is not in perpendicular alignment with a second plane that is parallel to said central longitudinal axis and intersecting at least a linear section of said second cutting edge.

14. An arrowhead comprising:

- Sub A1*
- (a) a forward leading end;
  - (b) an arrowhead body having a central longitudinal axis;
  - (c) a pivotal blade connected to said arrowhead body so as to be enabled to rotate relative to said arrowhead body, said pivotal blade having a cutting edge which extends to a forward terminus when said arrowhead is in a penetrating configuration; and
  - (d) a fixed blade having a cutting edge, said cutting edge comprising:
    - (i) a forward terminus; and
    - (ii) a rearward terminus, wherein when said arrowhead is in said penetrating configuration said forward terminus of said fixed-blade cutting edge is located rearward of said forward leading end of said arrowhead and said rearward terminus of said fixed-blade cutting edge is located forward of said forward terminus of said pivotal blade cutting edge.

15. An arrowhead as recited in claim 14 wherein said arrowhead body comprises an internal hollow cylinder that extends elongately for less than a majority of the length of the section of said arrowhead body that projects forwardly from an accompanying arrowshaft when said arrowhead is attached thereto.

*23*  
~~16.~~ An arrowhead as recited in claim ~~14~~ *22* wherein said pivotal blade and said fixed-blade are each housed within a blade slot.

*24*  
~~17.~~ An arrowhead as recited in claim ~~16~~ *23* wherein the blade slot that houses said fixed-blade and the blade slot that houses said pivotal blade communicate with each other.

*Sub A2*  
~~18.~~ An arrowhead as recited in claim ~~17~~ wherein the blade slot that houses said fixed-blade and the blade slot that houses said pivotal are substantially the same blade slot.

*26*  
~~19.~~ An arrowhead as recited in claim ~~18~~ *23* wherein the blade slot that houses said fixed-blade and the blade slot that houses said pivotal blade are substantially different blade slots.

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An arrowhead as recited in claim ~~19~~<sup>26</sup> wherein a line parallel to said central longitudinal axis intersects both said slots.

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An arrowhead as recited in claim ~~16~~<sup>23</sup> wherein each said slot comprises a bounding sidewall, said sidewall of each said slot being substantially non parallel to each other.

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An arrowhead as recited in claim ~~21~~<sup>28</sup> wherein at least one sidewall of the slot housing said fixed-blade is not perpendicular to at least one sidewall of the slot housing said pivotal blade.

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An arrowhead as recited in claim ~~14~~<sup>22</sup> wherein said cutting edge of said pivotal blade is substantially in coplanar alignment with said cutting edge of said fixed-blade when said arrowhead is in said penetrating configuration.

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~~24~~ <sup>31</sup>

An arrowhead comprising:

- (a) an arrowhead body having:
  - (i) a central longitudinal axis;
  - (ii) an exterior surface; and
  - (iii) a first blade slot and a second blade slot configured thereupon such that at least a section of said second blade slot is located substantially forward of said first blade slot;
- (b) a first blade attached to said arrowhead body at least in part within said first blade slot; and
- (c) a second blade attached to said arrowhead body at least in part within said second blade slot, wherein a line parallel to said central longitudinal axis intersects both said blade slots.

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An arrowhead as recited in claim ~~24~~ <sup>31</sup> wherein each said slot is externally exposed to only one opposing elongate side of said arrowhead body.

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An arrowhead as recited in claim ~~24~~ <sup>31</sup> wherein each said blade slot comprises a pair of opposing bounding sidewalls that each extend to an exposed exterior corner at their conjunction with said arrowhead body exterior surface so that when said parallel line is displaced a perpendicular distance away from said central longitudinal axis equal to a perpendicular distance that at least one of said second slot exterior corners is displaced from said central longitudinal axis, such that said parallel line is not located outside of said second slot sidewalls, said parallel line intersects at least a section of said first slot.

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An arrowhead as recited in claim ~~26~~ <sup>33</sup> wherein said first slot is substantially parallelly aligned with said central longitudinal axis.

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An arrowhead as recited in claim ~~24~~ <sup>31</sup> wherein said second blade is located rearward of the forward leading end of said arrowhead body.

29. <sup>36</sup> An arrowhead as recited in claim <sup>31</sup> 24 wherein a forward terminus of said second slot does not communicate with said longitudinal axis.

30. <sup>37</sup> An arrowhead as recited in claim <sup>31</sup> 24 wherein when said arrowhead is in an in-flight configuration the perpendicular distance between said longitudinal axis and the furthest section of said first blade from said longitudinal axis is longer than the perpendicular distance between said longitudinal axis and the furthest section of said second blade from said longitudinal axis.

31. <sup>38</sup> An arrowhead as recited in claim <sup>31</sup> 24 wherein each said blade comprises a cutting edge.

32. <sup>39</sup> An arrowhead as recited in claim <sup>31</sup> 24 wherein at least a linear section of each said cutting edge is substantially in coplanar alignment with each other when the arrowhead is in a penetrating configuration.

33. <sup>40</sup> An arrowhead as recited in claim <sup>39</sup> 32 wherein a rearward terminus cutting edge of said second blade is situated substantially forward of said first blade when the arrowhead is in an in-flight configuration.

34. <sup>41</sup> An arrowhead as recited in claim <sup>39</sup> 31 wherein when said arrowhead is in an in-flight configuration a plane perpendicular to said longitudinal axis of said arrowhead body intersects both said first blade and said second blade.

35. <sup>42</sup> An arrowhead as recited in claim <sup>38</sup> 31 wherein said arrowhead is a blade-opening arrowhead such that when in an in-flight configuration a non-sharpened leading section of said first blade outwardly projects from said arrowhead body.

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An arrowhead comprising:

- (a) an arrowhead body having a central longitudinal axis;
- (b) a pivotal blade connected to said arrowhead body so as to be enabled to rotate relative to said arrowhead body; and
- (c) a fixed-blade attached to said arrowhead body comprising:
  - (i) an edge extending peripherally thereabout; and
  - (ii) an exterior side face, wherein a plane coplanar with at least a section of said exterior side face is not parallel to at least another section of said exterior side face.

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An arrowhead as recited in claim 36 wherein said fixed-blade has a bent portion such that blade material of said fixed-blade is capable of being simultaneously housed within a pair of spaced apart blade slots that communicate with each other.

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An arrowhead as recited in claim 37 wherein said blade slots communicate with each other at least substantially near said central longitudinal axis.

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An arrowhead as recited in claim 37 wherein said spaced apart blade slots are off set from each other by substantially 120 degrees.

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An arrowhead as recited in claim 37 further comprising an arrowhead tip attachable to said arrowhead body so that when attached thereto a plane perpendicular to said central longitudinal axis intersects at least a section of both said fixed-blade and said arrowhead tip.

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41. An arrowhead as recited in claim 36 wherein said arrowhead body further comprises a hollow internally bound cylinder having a blade slot communicating therewith, said fixed-blade having a bent portion such that when said fixed-blade is attached to said arrowhead body within said blade slot at least a section of said bent portion is housed within said internal cylinder.

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42. An arrowhead as recited in claim 41 further comprising a shaft insertable within said cylinder when said fixed-blade is attached to said arrowhead body, said shaft being disposed within said cylinder so that at least a section of said bent blade portion of said fixed-blade is located between said shaft and an internal wall surface of said cylinder.

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43. An arrowhead as recited in claim 42 wherein said shaft is integral with a removably attachable arrowhead tip.

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44. An arrowhead as recited in claim 41 further comprising a plurality of said blades.

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45. An arrowhead as recited in claim 41 wherein said hollow cylinder comprises an elongate central axis, said central axis of said cylinder being collinear with said central longitudinal axis of said arrowhead body.

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46. An arrowhead comprising:

- (a) a forward leading end;
- (b) an arrowhead body comprising:
  - (i) a central longitudinal axis;
  - (ii) a blade slot;
  - (iii) an exterior surface; and
  - (iv) a cutting edge integrally formed on said exterior surface, said cutting edge having a forward terminus that is displaced rearward of said forward leading end of said arrowhead; and
- (c) a cutting blade having a cutting edge, said cutting blade being attached to said arrowhead body within said blade slot.

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47. An arrowhead as recited in claim 46 wherein at least one hone bevel is configured adjacent said integrally formed cutting edge for at least a section of the length of said integrally formed cutting edge.

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48. An arrowhead as recited in claim 46 having an integral cutting protrusion with said integral cutting edge formed thereon.

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49. An arrowhead as recited in claim 48 wherein the exterior surface of said integral cutting protrusion on at least one side of said integral cutting edge as determined in a plane perpendicular to said central longitudinal axis has at least a section thereof with a differing mathematical slope than at least another section of said exterior surface of said integral cutting protrusion on said side of said integral cutting edge.

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50. An arrowhead as recited in claim 46 further comprising a plurality of at least two integral cutting protrusions each having at least one said integrally formed cutting edge thereon, such that at least a section of said exterior surface of said arrowhead body that is not comprised of an integral cutting protrusion extends between at least a first integral cutting protrusion and a second integral cutting protrusion.

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~~51.~~ <sup>67</sup> An arrowhead as recited in claim ~~46~~ <sup>62</sup> wherein a line parallel to said central longitudinal axis intersects said blade slot and said integral cutting edge.

~~52.~~ <sup>68</sup> An arrowhead as recited in claim ~~51~~ <sup>67</sup> wherein at least a linear section of said blade cutting edge and at least a linear section of said integral cutting edge are in coplanar alignment with each other.

~~53.~~ <sup>69</sup> An arrowhead as recited in claim ~~46~~ <sup>62</sup> wherein a plane perpendicular to said central longitudinal axis intersects said blade slot and said integral cutting edge.

~~54.~~ <sup>70</sup> An arrowhead as recited in claim ~~46~~ <sup>62 69</sup> wherein at least a section of said integral cutting protrusion extends forward of said blade slot.

~~55.~~ <sup>71</sup> An arrowhead as recited in claim ~~46~~ <sup>62 60</sup> further comprising an integral arrowhead tip.

~~56.~~ <sup>72</sup> An arrowhead as recited in claim ~~55~~ <sup>71</sup> wherein said arrowhead tip has an integrally formed cutting edge.

~~57.~~ <sup>73</sup> An arrowhead as recited in claim ~~56~~ <sup>72 68</sup> wherein at least a linear section of said integrally formed cutting edge of said arrowhead tip is substantially in coplanar alignment with at least a linear section of said integrally formed cutting edge of said arrowhead body.

~~58.~~ <sup>74</sup> An arrowhead as recited in claim ~~46~~ <sup>62 60</sup> wherein said blade slot is substantially non-radially aligned with said central longitudinal axis of said arrowhead body.

~~59.~~ <sup>75</sup> An arrowhead as recited in claim ~~58~~ <sup>74</sup> wherein said cutting blade is a pivotal blade hingedly connected within said blade slot.

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